Information, Knowledge, and Deliberation

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INFORMATION: DEFICIT AND EXCESS

A well-functioning democracy or, perhaps, democracy as an institution that is worth defending, requires that citizens make well-reasoned choices. Yet, how do we make well-reasoned choices when we seem to be so bad at it? This is an old question—in some ways as old as some of the earliest recorded debates about the justifiability of democratic institutions—and the traditional perspective is that the effectiveness of democracy turns on its ability to aggregate information. The information relevant to governance is diffused across citizens. Democratic institutions pool that information—some better than others—and produce outcomes that are better than the judgment of individual citizens. This is a phenomenon, or a hope, that has become ubiquitously known as "wisdom of the crowds" (Goodin and Spiekermann 2018; Hong and Page 2004).

A key contribution of Lupia and McCubbins's (1998) book is to suggest a way of approaching the old question from a perspective that upends the informational presuppositions of the "wisdom of the crowds." As they put it, "Ironically, for many political issues, information is not scarce; rather, it is the cognitive resources that a person can use to process information that are scarce" (Lupia and McCubbins 1998, 6). Indeed, the issue is not that there is too little information for a correct individual judgment but instead that there is too much of it. The real problem is one of properly making sense of all the information, of figuring out what is relevant, and—critically for their book—at a meta-level, how we could know how to know that. In Lupia and McCubbins's language, this is a problem of knowledge (that is, of effective reasoning through the information), not a problem of information deficit. They are, thus, less interested in whether aggregation can generate better, informed outcomes than in understanding how people sort through information in the first place.

The idea that the problem may be the opposite of an information deficit is an important insight that holds great explanatory power, even if existing work in social sciences has barely scratched the surface.[1] The two problems also are quite distinct. Information deficit and information excess are not equivalent in their legal and political implications: for example, transparency (conventionally understood as the commitment to not withhold information) is a fine remedy for the former but may exacerbate the latter.

Neither are the appropriate formal environments for theorizing these two problems likely to be logically equivalent (though see more below). It is implausible that the inability to process efficiently is independently randomly distributed across the information space, and so the settings that generate the wisdom-of-the-crowds results by relying on the comparable assumption with respect to the distribution of private signals (e.g., in different variations of the Jury Theorem) are—from this perspective—implausible also. Indeed, the processing inefficiencies are systematic with respect to the types of information and citizens' prior beliefs and backgrounds (Kahneman 2011), and consequently, in the standard one-step aggregation environment, they will lead to biased, not wise, collective choices. The bottom line is that information aggregation is not a solution for the information-excess problem.

If the condition is one of information excess and the challenge is how to turn information into democratically usable knowledge, what are the possible solutions? Lupia and McCubbins's main claim was that citizens can sustain effective democratic governance through deference to those with expert knowledge. The key to acquiring the relevant knowledge is figuring out how to identify whom to trust in the context in which enjoying trust and commanding (and possibly manipulating) the following that comes with it are highly desired—in other words, in an environment in which misrepresentation is to be expected. In exploring this idea, Lupia and McCubbins's book set the methodological standard of closely linked strategic micro-models and laboratory experiments for much of subsequent work.

Strikingly, the claim that the right response to one's insufficient knowledge and, at the aggregate level, a way to preserve the salutary epistemic property of collective choice may be to defer to other (more knowledgeable) citizens and experts parallels a central conclusion reached at about the same time from within the deficit-of-information approach. The "rational abstention" result of Feddersen and Pesendorfer (1999) was formulated in the context of better (i.e., more precise) or worse (i.e., less precise and noisier) information, but it has the same implication.

In an important sense, this coincidence is not surprising because Lupia and McCubbins's approach was to transform, instrumentally, the information-excess problem into the information-deficit problem. They did this by resolving the question of how to obtain knowledge into the question of how to find the knowledgeable and the trustworthy, and, conventionally, they treated the latter as a question of the information-deficit type. By so doing, they were able to apply standard information-theoretic tools and the technology of cheap-talk signaling. Deference to experts being the paradigmatic theme of the information-deficit framework, Lupia and

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McCubbins's approach, in effect, circled back to it, grounding it in behavioral micro-foundations concerning excessive information about policy, the cognitive burdens of personal judgment, and incomplete information about opinion leaders—that is, the micro-foundations that more plausibly fit democratic electorates.

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While the cue-taking mechanism is, certainly, behaviorally prominent, the information-excess problem that was Lupia and McCubbins's point of departure continues to loom large with respect to the question of public argumentation, which remained outside of their framework. Yet, the public debates that lead to electoral and policy changes proceed not only by opinion leaders' taking positions but also by their attempts to develop syllogistic associations—that is, resonating arguments that can reinforce voters' self-understanding as not merely supporters of candidate A or policy A but also as supporters of candidate A for an articulable (if possibly not broadly shared and even mistaken) reason. It is not obvious how to think meaningfully about such argumentation within the information-deficit framework; and so what light the transformation of the information-excess problem into the information-deficit problem can shed on it. The next section describes the broad contours of an approach that my colleagues and I developed to conceptualize this phenomenon within an argument-based framework that captures critical features of information-excess problems. In an important sense, this approach is inspired by Lupia and McCubbins's (1998) formulation of the problem of democratic governance in information-excess terms and complements the mechanism they studied. However, in a different sense, it provides an alternative answer to the key motivating question of whether and how citizens can learn what they need to know for democratic governance.

A DIFFERENT RESPONSE TO THE PROBLEM OF KNOWLEDGE: DELIBERATION AS SELF-DISCOVERY

The core idea is that of "deliberation as self-discovery"—a deliberative interaction that, if successful, produces greater self-knowledge in the sense of creating an understanding of what judgments the participants should have held in the first place and why.[2] The upside of such an interaction is not the gain of information previously held privately by the speaker and now shared with a listener but rather the gain of the "connective tissue" between pieces of information that the listener already holds true but of which she might have failed to take proper count. In a familiar language, there are "latent" beliefs or reasons that deliberation may "activate" (Hafer and Landa 2007; Hummel 2012; Landa 2015.)

The standard cheap-talk signaling model is the natural model of communication between an expert and a dilettante (or a knowledgeable opinion leader and a follower who is interested in copying the leader's position). The asymmetry of knowledge/expertise does not leave room for the receiver to evaluate the truth content of the sender's statements: the latter's believability is determined by the equilibrium incentives and the conjecture about play. The resulting challenge implies the key subsidiary questions of Lupia and McCubbins's inquiry into how effective democratic governance may be possible: "Whom can you trust?" and "What conditions make trusting possible?"—or, alternatively, "When will the communication from an opinion leader to a potential follower succeed?" The possibility of what they called "enlightenment"—resulting from opinion leaders' knowledge-based truth telling—as opposed to deception and/or absence of learning, depends on the equilibrium compatibility of the underlying environment with the posited behavioral rules (Landa and Meirowitz 2009).

In contrast, the natural communication framework for studying deliberation as self-discovery is one with verifiable messaging because—to the extent that opinion leaders use arguments—they issue messages with discernable (if somewhat decidedly "little *t*") truth content. Their verification is in the form of "internal resonance": if the message sent (argument made) resonates with the receiver—because it either activates a latent reason or matches an already active one—the receiver successfully verifies the message as truthful; if the message fails to resonate, she does not. From the receiver's perspective, a new resonating argument is like a previously elusive solution to a puzzle: although she may have always understood which features a solution required and had all the necessary clues, the number of possibilities to consider in the search for the solution may have been simply too great to readily find the solution herself. The key challenge of information excess has the same critical feature: it is a daunting task to consider each piece of information and determine its relevance, yet—as with seeing a solution to a puzzle—when the relevant bits are selected and put together, it is easy to discern that and how they are relevant. The puzzle analogy has an important caveat. Our individual puzzles may be different: what resonates with one may not with another. This means that the truth content of a message may be contingent on the receiver. However, the sender, although perhaps an opinion leader, has no private information with respect to any given receiver unless her model of the receiver's system of beliefs happens to be correct. What is unknown is the compatibility (or complementarity) between the message and a given receiver's system of beliefs; it is an unknown for both the sender and the receiver, and it only becomes knowledge through the receiver's acts of listening and processing the relevant message.

In this framework, the key subsidiary questions for the inquiry into the possibility of knowledge-based democratic

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governance are: "How does acquisition of knowledge depend on whether the message resonates?" and, if it does depend, "Is it worth one's time to listen to speaker A or to speaker B?" The first critical piece of the answer to the first question that emerges from experimental and theoretical studies is that the quality of inference importantly depends on receiver sophistication (Dickson, Hafer, and Landa 2008; 2015). When the received argument resonates, there is "direct" learning. This is a relatively simple case that imposes little in the way of cognitive burdens on the receiver. However, if the argument does not resonate, or resonates only partially, there is room for "indirect" learning—albeit learning that requires relatively more complex reasoning as well as being able to place the argument in perspective with respect to what is "out there" or judge the sincerity of the speaker's effort in light of the interests she is trying to advance. (For example, consider an argument for the claim that "Citibank is too big to fail." What follows from the fact that that argument does not work for you?) In short, an efficient update demands from the receiver sophistication both cognitively—in requiring a contrapositive inference from a null event—and politically, in requiring understanding of what policy alternatives are possible and likely and of the political context framing the speaker's incentives. The less plausible the assumption of sophistication, the less informative is the nonresonating argument and the more apt the receiver is to regard it as simply irrelevant.

The second key piece turns on the incentives to offer arguments, given the expectation of receivers' responses. The upside of offering an argument is bringing a receiver along; the downside is turning her off. The less sophisticated the receiver, the more difficult it is for her to make inferences from arguments that do not resonate and, thus, the less possible downside there is to a speaker's trying out an argument on her. Less-sophisticated receivers are less likely to be turned off, shifting the speaker's incentives in favor of offering argumentation.

This brings us to the conclusion that speaks to Lupia and McCubbins's main question. Lower sophistication on the part of the receivers—that is, their difficulties in making sense of the information they have—encourages argumentation on the part of opinion leaders, who can be less concerned about the possible downside of alienating the audience. The consequence is to make it more likely that receivers, as they sort through streams of information, see the arguments that resonate with them and, ultimately, can make sense of their information. Strikingly, difficulties of turning information into knowledge—which, in this account, stem from insufficient cognitive and/or political sophistication—may, in a strategic context, have the effect of increasing citizens' knowledge (Hafer and Landa 2013; 2018). The overall effect is, then, to make well-reasoned democratic governance possible even though we seem to be bad at reasoning at an individual level.

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From the standpoint of democratic theory, this bridging of the substantial informational and cognitive demands placed on citizens by the normative theories of democracy on one hand and the more modest expectations urged by social and political psychologists on the other is clearly good news. It also suggests that the answer to Lupia and McCubbins's key question from the analysis of deliberation as self-discovery complements their position-taking theory: each approach identifies a distinctive mechanism that could lead to better choices by citizens overwhelmed with information than we might have plausibly expected.

Yet, if this conclusion sounds a touch too rosy, it is. The reason is that, ultimately, the lower the receiver sophistication, the more important is the exposure to the arguments from both right and left for making sense of information. If the only arguments received are for and never against policy A, an unsophisticated receiver who generally—and, perhaps, correctly for her—leans toward A-like policies may believe that she is for A even though pro-A arguments have not resonated with her and there exists a contra-A argument (albeit one she has not heard) that would. Such one-sided exposure does not undermine the argument about the beneficial effects of lower sophistication in a strategic sender–receiver setting; however, it does, of course, lower the upside of a deliberative process.

This observation suggests a tension between Lupia and McCubbins's (1998) central subsidiary argument about cue taking and the epistemic potential of citizens' deliberative engagement described above. The cues from opinion leaders whom citizens—correctly—trust as their likely epistemic proxies naturally lead to citizens' self-selecting as those leaders' respective audiences. The effect is the one-sided exposure that creates or reinforces biases in citizens' information processing. If citizens' deliberative engagement were limited to cue taking, then the conclusion of epistemic gain would appear unobjectionable—and, in a counterfactual world with no informative cues from potential opinion leaders, the epistemic properties of democratic choices would suffer. However, if citizens learn more than which positions to take but also *why*, then the absence of the knowledge shortcuts could be a path to better (i.e., less-biased) knowledge.

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The bottom line of this tension, then, is a challenge to the position-taking theory as an affirmative answer to whether citizens can learn what they need to know for effective democratic governance. A finer parsing of when successful (or, in Lupia and McCubbins's sense, enlightenment-inducing) cue taking would produce net beneficial effects is a largely unexplored avenue of analysis, waiting to be addressed by present and future heirs of their important project. ■

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NOTES

1. Apart from the work discussed in this article, it has had some traction in security studies (Treverton 2003) and in some accounts (e.g., Gladwell 2007) of challenges to shareholder oversight.
2. In this model, similar to textbook incomplete-information models, the agent's utility is higher when she makes a better decision; however, reflection and argumentation (and possibly also the instrumental decision to listen and receive) are key to getting there.

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